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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHEVIN, MARK L

ART UNIT

PAPER NUMBER

1793

NOTIFICATION DATE

DELIVERY MODE

12/28/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@howsonandhowson.com

Office Action Summary	Application No. 10/598,997	Applicant(s) NAKAMURA ET AL.	
	Examiner MARK L. SHEVIN	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 7-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, and 7-19 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement of RCE

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 13th, 2009 has been entered.

Status of Claims

2. Claims 1-2 and 7-20, filed October 13th, 2009 are pending. Claims 1 and 15 are amended and claims 3-6 are canceled.

Status of Previous Rejections

3. The previous rejections of claims 1-2 and 7-20 under 35 U.S.C. 103(a) over **JP '623** (JP 2002-069623 – Machine translation) in view of **JP '860** (JP 2001-026860 – Machine translation) in the Office action dated May 13th, 2009 have been withdrawn in view of the amendments to claims 1 and 15 and Applicants' remarks at p. 7, para 3 to p. 8, para 1 of the October 13, 2009 response.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. **Claims 1-2 and 7-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Uchida** (US 5,468,305).

Uchida:

Uchida discloses a method of lowering the magnetic permeability of difficult-to-work Co-base alloys (Abstract) for sputtering targets (col. 1, lines 7-21). The Co alloy may contain Cr: 4 - 25 at% (col. 4, lines 1-7), Pt: 0.1 - 40 at% (col. 3, lines 60-67), B: 0.5 - 5 at% (col. 4, lines 10-23) with the remainder Co.

An ingot of the Co-alloy is cast by, for example, vacuum melting (col. 5, lines 1-12), covered with a glass lubricant and hot rolled in two or more stages, with re-heating in-between to 900 °C or more, to a final reduction of 30% or more (col. 5, lines 14-38).

Optionally, cold rolling to a final reduction of 10% or less may be performed after hot rolling to further reduce the magnetic permeability of the Co-alloy sputtering target (col. 5, lines 38-45).

Hot rolling and cold-rolling are shown to reduce the magnetic permeability of the Co-alloy sputtering targets as exemplified in Figure 4.

Regarding claims 1, 2, and 7-16, it would have been obvious to one of ordinary skill in sputtering target manufacturing, at the time of the invention, to have formed a Co-Cr-Pt-B sputtering target with the claimed composition of at least Co, Cr, Pt, and B and having the claimed microstructure as Uchida manufactures a Co-alloy sputtering target of a substantially similar composition (teaches alloy may be Co-Cr-Pt-B)

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manufactured into a Co-alloy sputtering target by a substantially similar process as compared to that used to manufacture the claimed sputtering targets.

From the instant specification: the instant Co-Cr-Pt-B target is first cast (p. 4, lines 3-10 and p. 5, lines 23-27) and repeatedly hot rolled and heat treated at 1100 °C (p. 4, lines 19-22 and p. 6, Table 1) to a final reduction ratio of 15 – 40% (p. 4, lines 22-30 and p. 6, Table 1). The alloy may be further cold rolled at 10% total reduction or less (p. 5, lines 11-13) to further improve magnetic properties.

As stated above regarding Uchida: an ingot of the Co-alloy is cast by, for example, vacuum melting (col. 5, lines 1-12), covered with a glass lubricant and hot rolled in two or more stages, with re-heating in-between to 900 °C or more, to a final reduction of 30% or more (col. 5, lines 14-38). Optionally, cold rolling to a final reduction of 10% or less may be performed after hot rolling to further reduce the magnetic permeability of the Co-alloy sputtering target (col. 5, lines 38-45).

Uchida manufactures an overlapping Co-base alloy by a process that overlaps each and every processing step disclosed to manufacture the disclosed sputtering targets.

Thus, one of ordinary skill in sputtering target manufacturing would have reasonably expected that Uchida produces Co-Cr-Pt-B sputtering targets that meet the claimed limitations of claims 1-2, 7-16 regarding island-shaped precipitates and their size, average crystal grain size, hot-rolled structure, rolling ratios because Uchida is a substantially similar product manufactured by a substantially similar process as described above.

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Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Furthermore, from MPEP 2112, para. V, subpara 1: "[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on 'inherency' under 35 U.S.C. 102, on '*prima facie* obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same..." The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)). See MPEP 2112.

Regarding claims 17-19, with respect to the claimed ranges of in-plane variation of coercive force (H_c) and coercive force, these properties would be reasonably expected to be present in the final product of Uchida as Uchida manufactures substantially similar Co-Cr-Pt-B alloy sputtering targets by a substantially similar manufacturing process as described above and the claimed magnetic properties are a product of the sputtering targets composition and microstructure, both of which would be expected from Uchida's final products.

Allowable Subject Matter

5. **Claim 20** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Indicating Allowable Subject Matter

6. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of Uchida (US 5,468,305) teaches away from the claim 19's limitation of 10 at% boron by stating that boron should be limited to 5 at% to prevent workability from deteriorating (col. 4, lines 10-23).

Response to Applicant's Arguments:

7. Applicant's arguments filed October 13th, 2009 have been fully considered but are moot in view of the new grounds of rejection applied in the instant Office action.

Conclusion

- Claims 1-2 and 7-19 are rejected**
- Claim 20 is objected to**
- No claims are allowed**

The rejections above rely on the references for all the teachings expressed in the texts of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the texts of the references. To emphasize certain aspects of the prior art, only specific portions of the texts have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since

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other sections of the same reference and/or various combinations of the cited references may be relied on in future rejections in view of amendments.

All recited limitations in the instant claims have been met by the rejections as set forth above. Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark L. Shevin whose telephone number is (571) 270-3588 and fax number is (571) 270-4588. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy M. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Mark L. Shevin/
Examiner, Art Unit 1793

December 9th, 2009
10-598,997

/George Wyszomierski/
Primary Examiner
Art Unit 1793